COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
FIRST SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

DTE 1-2 Refer to Exh. BSG/JES-1, at 40. Please provide the dollar amount of non-revenue-producing retirements completed by the end of the test year that have not been recognized in computing the Company's test year-end plant in service.

Response: The dollar amount of retirements of plant physically completed by the end of the test year, but not yet removed from the appropriate property records and transferred to the depreciation reserve, is not readily available. Generally, as a construction project is completed and transferred to the appropriate utility account in general ledger 101, any corresponding retirement is manually recorded on a one to two month lag.

Since the original cost of the property being retired is transferred from utility plant in service to the depreciation reserve, there is no impact on rate base.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
FIFTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Witness Responsible: Stephen H. Bryant, President

DTE-5-16: Please provide all correspondence between Itron and Bay State, or any of Its affiliates since 1992.

Response: Please see the following attachments containing the correspondence between Itron and Bay State:

Attachment DTE-5-16 (a): Itron System Sales Agreement.

Attachment DTE-5-16 (b): Itron Correspondence.

Bay State also has in its possession a variety of technical materials related to Itron equipment that can be provided upon request.

BULK RESPONSE

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
FIFTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

DTE-5-27 Refer to Exh. BSG/JES-1, at 35. Did Bay State or any of its affiliates own the Itron equipment outright prior to the $2.4 million sale/lease back of Itron equipment that occurred in December 2004? If not, what was the status of the Itron equipment prior to December 2004? If so, why did Bay State decide to enter into the sale/lease back arrangement?

Response: Bay State owned the Itron equipment prior to selling it and leasing it back. The cost-benefit analysis conducted by the Company showed that it was beneficial to sell and lease the devices back. Please see Attachment DTE-5-26.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
ELEVENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: Steven A. Barkauskas, Vice President Total Rewards
NiSource Corporate Services Company

DTE-11-29 Refer to Exh. BSG/JES-1, at 16. Explain how the Company selected its test year health-care provider(s).

Response:

The fully insured health plans that are offered at Bay State (as well as their designs) are negotiated with the union representatives during the collective bargaining process. Each year, we solicit the fully insured health plans (often HMOs) to determine whether the current benefits can be maintained, or whether there were any changes in state law that might require a modification to the available coverage.

We utilize the services of a third party (Hewitt Associates) to negotiate the premium rates with these health plans. Hewitt uses their actuarial and underwriting skills to examine the renewal exhibits provided by the health plans, the market information that they collect on behalf of all their clients, and their negotiation skills to ensure that NiSource is paying a fair and competitive price. It is in the best interest of NiSource and its employees that we have a third party expert negotiate the premium rates for us.

We also offer a self insured program to NiSource employees through Anthem Blue Cross Blue Shield. In selecting Anthem, we conducted a thorough analysis of their capabilities and financial offers.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
ELEVENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: Steven A. Barkauskas, Vice President Total Rewards
NiSource Corporate Services Company

DTE-11-30 Refer to Exh. BSG/JES-1, at 16. Has the Company ever challenged any health-care related bills from hospitals, doctors, or other health-care providers? If yes, please explain. If not, please explain what internal auditing procedures the Company employs to ensure that bills are accurate.

Response:

NiSource offers a combination of fully insured and self insured plans to its employees. The plans themselves are 100 percent at risk in a fully insured environment (we pay a flat rate regardless of actual claims costs). The health plans (HMOs) are the payor of all claims to the health care providers (doctors and facilities) and we do not receive actual patient bills. It is in the best interest of the plan to ensure they are paying the correct and lowest cost to these providers since they are at risk for all claim payments.

In a self insured environment, NiSource contracts with a third party administrator to pay claims directly to the health care providers. The majority of these claims are paid to providers that are contracted with the administrator. The administrator negotiates the fees for services provided directly with the providers, and adjudicates the claims for us. We do not receive bills from the providers or from employees. To check the financial accuracy of the administrator's claims processing, NiSource conducts periodic reviews of the administrator's process and the coding of their claims system.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
ELEVENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: Steven A. Barkauskas, Vice President Total Rewards
NiSource Corporate Services Company

DTE-11-31 Refer to Exh. BSG/JES-1, at 16. During the last three years, has the Company solicited bids for alternative dental-service providers? If so, please provide the results of any such bids and explain how the Company selected its test year dental-service provider.

Response:

NiSource offers two dental vendors to Bay State employees. One is Dental Blue, the other is Cigna. In the case of Dental Blue, this plan was requested by, and negotiated with, the union's representatives during the collective bargaining process.

With respect to Cigna, NiSource went through an extensive request for proposal (RFP) process in 2003. RFPs were sent to five major dental carriers including Aetna, Cigna, Athem Blue Cross Blue Shield (one of our medical carriers), Delta Dental and Met Life. We retained a third party evaluator (Hewitt Associates) to develop an RFP process and to evaluate each vendor's capabilities in several areas including : Network Coverage, Administration Capabilities, Quality Controls, Ability to Administer the Required Plan Design, Financial Offer, Customer Service Operations and Various Legal and Liability Issues. Based on this analysis, and further financial negotiations, we selected Cigna as our dental vendor. The Cigna plan is offered to all NiSource employees, including Bay State.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
ELEVENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: Steven A. Barkauskas, Vice President Total Rewards
NiSource Corporate Services Company

DTE-11-32 Refer to Exh. BSG/SAB-1, at 38. Provide the actual amount of test year employee contributions to the Company's 401(k) plan that were eligible for a matching contribution from the Company.

Response:

The amount of employee contributions made by Bay State employees to the Company's 401(k) plan during 2004 was $2,432,941.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
FOURTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: John E. Skirtich, Consultant (Revenue Requirements)

DTE-14-1 Refer to the Company's responses to DTE 6-9 and DTE 6-10 dated June 1, 2005. Please identify the mechanism that allows the Company to utilize the compliance phase of the proceeding to remove the proposed postage adjustment, and to include test year postage expense in the O&M expenses subject to the general inflation factor when that number is rerun for compliance. Provide all rules, regulations, and other documentation to support this process.

Response: I am not a lawyer, but my understanding of the Department's rate setting practice for postage is as follows. Postage is normally adjusted for known increases. The inflation factor adjusts all miscellaneous O&M that are not individually adjusted. Since a formal announcement of an increase has been provided, even though the date of commencement of the increase has not yet been established, it is reasonable that the increased expense be recovered as part of an individual adjustment, and if not there then in the revenue requirement categories of costs that are subject to the inflation allowance. I personally am unaware of this particular situation being presented in any prior rate proceeding before the Department relative to postage expense.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
SIXTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 2, 2005

Responsible: Danny G. Cote, General Manager

Supplemental Response

DTE-16-19 Refer to Exh. BSG/DGC-11, at 1. Please provide any manuals or publications that describe the purpose, structure, and operation of the Client Server Migration. Describe with supporting documentation any modifications and enhancements to the system from 1996 to 2004.

Response: Client Server Migration is a collection of many activities borne out of the need to migrate from antiquated and non-intelligent computer access to that utilizing the power of the personal computer.

Prior to 1996, many of Bay State's computer systems were based on "dumb" terminal user interfaces. These required users, for example Customer Service Representatives, to memorize complex codes to execute functions within legacy applications. With the advent of personal computers attached in parallel with network servers and mainframes, it was possible to take advantage of the intelligence that could be built into the personal computer. The personal computer and the network servers could be programmed to display information in a form that was easily recognizable to the user as well as a more efficient and effective means to communicate with the customer. Client Server Technology also allows the Company to mitigate the expansion and the cost associated with larger mainframes by utilizing the computing capacity of the personal computer and the servers.

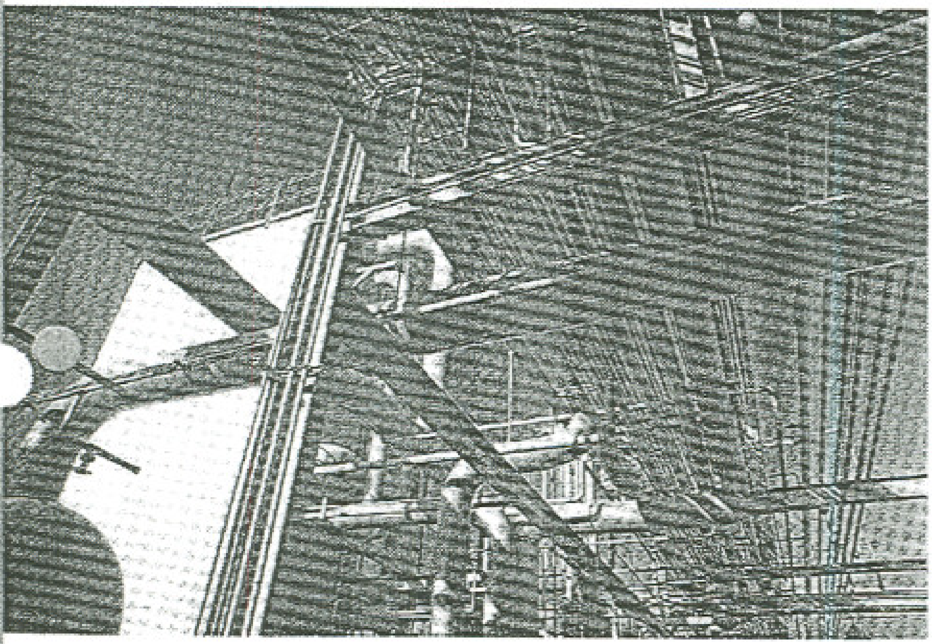
Although this effort began in the mid 90's at Bay State, it was a prelude to and a factor considered in the implementation of the Customer Information System that was eventually installed so as to become to become Y2K compliant in the late 90's. Since 1996-2004 Bay State has made normal expected Age & Conditioning improvements as well as enhancements to capacity throughput. As they become more powerful with added functionality, Bay State continues to embellish and enhance the use of personal computers and network servers.

Supplemental Response:

Please see Attachment DTE-16-19.

HEWLETT PACKARD

Bay State Ready for Competition with HP Client/Server Platform



Bay State Gas is the largest independent natural gas distributor in New England, serving almost 300,000 customers in Massachusetts, New Hampshire, and Maine. In addition to natural gas, Bay State distributes propane, provides energy conservation services, and sells and services energy-related equipment.

Utilities Industry Case Study

Customer:

Bay State Gas Company
Westborough, MA

- *Largest independent natural gas distributor in New England*

Challenges:

- *Use technology to gain a competitive advantage*
- *Support rapidly changing business needs*
- *Respond faster and with more flexibility to user requests*
- *Lower operating and capital costs*

Solution:

- *CSC Consulting COMPETE/21℠ CIS Design Guide*
- *Progress Version 7 4GL and database*
- *Lawson Open Enterprise Financials, Human Resource, and Materials Management Systems*
- *Hewlett-Packard 9000 Series Servers*

Results:

- *Improved customer service with one-stop shopping and enhanced field work force scheduling*
- *Faster response to new and changing corporate initiatives*
- *Reduced costs in customer service, construction, and computing*
- *Increased sales*

HEWLETT PACKARD

HP provides flexibility

With its application architecture defined, Bay State needed to select its open hardware and systems software provider. An RFP was sent to five UNIX® platform providers. According to Doucette, HP was selected based on its position of leadership in and experience with open systems, its high customer satisfaction ratings, its financial stability, and its broad scaleable product line. Bay State purchased six HP servers, one for development, one for systems and network support using the HP OpenView framework, and others for financial, human resource, customer, and decision support applications.

Doucette says that Bay State is extremely pleased with the choice. "Since we signed up, HP has announced several exciting new server products. And, they have made it easy for us to move up without reconsidering our overall strategy. We were also able to purchase a work scheduling application that runs in the HP environment and use it off-the-shelf without significant modification. It will save us considerable time and money." In addition, total computing costs are going down. "We've already found that HP's powerful client/server platform is less expensive to buy and maintain than our prior mainframe platform," explains Doucette. Bay State hopes to lower computing costs by $800,000 to $1 million per year, a savings that benefits both its shareholders and customers.

PSO assists with transition

Moving from a mainframe to a client/server environment is challenging and Bay State called on HP's Professional Services Organization (PSO) to help create an architecture for network and system administration. PSO helped analyze resources, processes, and tools required to implement a new client/server environment and suggested network management tools based on HP's network management platform, OpenView. Bay State has already implemented this strategy. PSO has also developed a strategy for implementing an internal Help Desk which Bay State intends to implement in the future.

Ready for anything

Doucette is optimistic about the benefits of the new system. "Bay State recognizes that it cannot achieve its business goals without the creative application of technology. Our business alliances with CSC, Progress, Lawson, and Hewlett-Packard, coupled with our talented internal IS staff, give Bay State Gas the competitive edge we need to succeed now and into the 21st century."

For more information, contact any of our worldwide sales offices or HP Channel Partners (In the U.S., call 1-800-637-7740; in Canada, call 1-800-387-3867).

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"HP was selected based on its position of leadership in and experience with open systems, its high customer satisfaction ratings, its financial stability, and its broad scaleable product line."

Like other natural gas suppliers, deregulation and a competitive environment are forcing Bay State to change its business model. Already large customers have a choice of natural gas suppliers. Soon, small customers will as well. According to John Doucette, vice president of corporate services, two key business issues – an increased customer focus and a product line that is becoming increasingly diverse – have driven Bay State to upgrade its computing environment. "Responding promptly to requests for new system features and functions that allow our employees to provide additional value to our customers is key to gaining a competitive edge. Capturing more information about customers so we can identify useful new products and services is also vital. In order to meet these new business demands, we must be both fast and flexible, " explains Doucette.

Better customer service

Bay State decided to move all of its core business applications off the mainframe into an open, distributed client/server environment which provides increased speed, flexibility, functionality, and choice. Bay State is rebuilding its homegrown customer applications in three stages: work management went into production in February 1995; sales and marketing support will be implemented in October 1995; and billing, A/R, and customer service will be deployed in Q1 1996.

Bay State selected the COMPETE/21 CIS Design Guide from Computer Sciences Corporation (CSC) of Waltham, MA as the foundation for its new customer information system. Doucette explains that they chose CSC for three reasons. Bay State had worked with CSC for many years and had developed a close partnership with them. Bay State was also impressed with CSC's overall strength in and experience with the utilities industry. Finally, CSC had a deliverable – the Design Guide – which provides a functional model for the "Utility of 2000." The Design Guide encompasses all major business functions that affect the customer, from meter reading to billing to credit and collection and appliance installation and service.

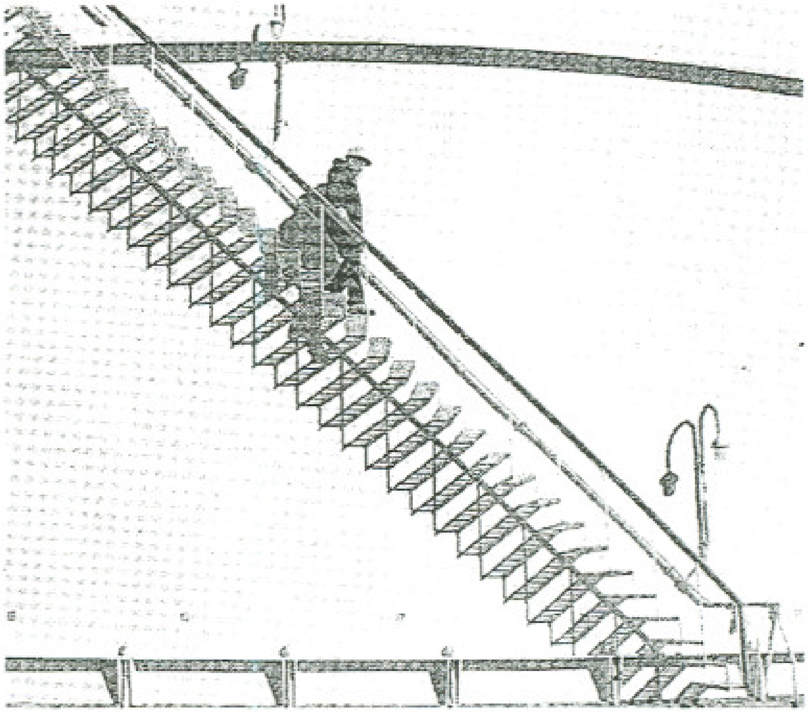
Improved customer satisfaction is a major business benefit of the new system. Today, before implementation of the new system, customers have to call several numbers for resolution of different types of problems and customers with multiple sites get a separate bill for each meter. Doucette anticipates that with the new system 95% of customer problems will be resolved with a single phone call. The new system can also provide summary billing statements to customers with multiple meters, a service that was not possible with the old customer system.

The new customer system will also be used to stimulate revenue growth. Tracking more meaningful information about each customer will help Bay State identify new services and products of value to its customers. For example, information about energy usage can be used to formulate new energy management services. In addition, Bay State plans to have customer service representatives who answer incoming calls also offer additional services, such as a new water heater, a warranty program, or conservation services, after they resolve the initial question or problem. The new system, with its ease of navigation and situation-specific prompting capability supports this expanded activity, which will have a positive impact on revenue.

Finally, the new system will reduce costs. For example, the new work management sub-system provides access to more complete and timely information about each construction project. By analyzing this data, Bay State is finding less costly ways to repair and extend its distribution system. Doucette expects the company to save over $2 million annually in construction costs. In addition, Doucette anticipates lowering customer service costs by more than $500,000 per year while at the same time improving customer service. They will achieve these benefits by consolidating currently dispersed administrative functions into three, more efficient regional call centers that provide economies of scale and enable "one-stop shopping." The regional call centers are slated to open in the Spring of 1996.

Application tools help speed transition

Doucette feels that Bay State's choice of application tools and technology partners has had a very positive impact on how quickly it will be able to transition to the new open environment. "We have a very aggressive schedule," he elaborates. "We'll complete our transition to an entirely new application portfolio on new platforms in just under two years." Bay State is developing the customer service applications internally with Progress Software's 4GL and database. The Progress toolset supports much faster development than COBOL and effectively integrates all aspects of enterprise-level client/server development – database management and access, complex business logic, GUI presentation, and flexible deployment. In addition, the COMPETE/21 Design Guide, which provides an on-line prototype, a logical data model, and functional specifications, has given Bay State tremendous leverage in developing its new customer service system.



Bay State has moved other strategic applications to the HP client/server platform as well. They had been running Lawson Software's fully-integrated financial, human resource, and materials management systems on their mainframe since 1985. Doucette notes that in recent years Lawson had shifted its focus from enhancing its mainframe product line to enhancing its client/server products. However, due to Lawson's flexible Open Licensing policy, Bay State was able to easily – and inexpensively – migrate to a client/server platform. "We got more robust versions of products we were already using from a vendor we already knew and liked," concludes Doucette.

When the entire project is completed, Bay State will have over 500 on-line users and over 20 mission-critical applications supporting the day-to-day needs of its users and customers.

Continued on back page

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
SIXTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: Danny G. Cote, General Manager

DTE-16-21 Refer to Exh. BSG/DGC-11, at 1. Please provide any manuals or publications that describe the purpose, structure, and operation of the Easy System. Describe with supporting documentation any modifications and enhancements to the system from 1999 to 2004.

Response: **BULK ATTACHMENT**

Attachments D.T.E.-16-21 (a), (b), (c) and (d) presents manuals that support and describe the purpose, structure, operation and modifications related to the EASy system.
Attachment D.T.E.-16-21 (a) is the EASy Off-System User Manual
Attachment D.T.E.-16-21 (b) is the EASy Implementation – Off System Requirements Review Manual
Attachment D.T.E.-16-21 (c) is the EASy Off-System Planning Module Review Session notes
Attachment D.T.E.-16-21 (d) is the Enhancement Log (Issues – By Priority) for the EASy System.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: Stephen H. Bryant, President

SUBSTITUTED RESPONSE

DTE-18-18 Refer to Exh. BSG/SHB-1, at 38-40. Assuming that the Department rejects the steel infrastructure replacement ("SIR") component of the annual base rate adjustment mechanism, would the Company file for a base rate increase given the indicated level of annual incremental capital expenditures committed under the SIR program? If yes, would such base rate filing(s) occur within the five-year term of the performance-based regulation ("PBR") plan proposed by the Company?

Substituted Response:

If the Department rejects the steel infrastructure replacement ("SIR") component of the annual base rate adjustment mechanism, it is almost certain that the Company would file for a base rate increase within the five-year term of the performance-based regulation ("PBR") plan proposed by the Company. A filing would be necessary to recover the carrying costs of $100 million of non-revenue-producing bare steel pipe replacement over the next five years, as compared to expenditures if the Company did not accelerate the replacement of bare steel.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 1, 2005

Responsible: Danny G. Cote, General Manager

Revised Response

DTE-18-23 Please refer to the Company's response to Information Request AG-2-33.

A) Identify the source(s) of the data shown in Attachment AG-2-33;

(B) Describe the independent and dependent variables used for each of the regression analysis shown on pages 1, 2, 4, 5, and 6 in Attachment AG-2-33 and provide the summary of statistical output for each regression analysis performed;

(C) Define with illustrative examples "bell joint" leaks, as shown in Attachment AG-2-33, at 7 and 8, and relate or differentiate this type of leaks with corrosion leaks; and

(D) Define with illustrative examples "outside force" leaks, as shown in Attachment AG-2-33, at 9 and 10, and relate or differentiate this type of leaks with corrosion leaks.

Response: (A) The source of the data shown in Attachment AG-2-33 is the Research and Special Programs Administration (RSPA) Form F7100.1-1, Annual Report for Gas Distribution Systems.

(B) The independent variable, the calendar year, is shown on the x-axis. The dependent variable is shown on the y-axis. Depending upon the graph being reviewed, the dependent variable is either the leak rate per mile or number of corrosion main leaks repaired or eliminated during the year. The leak rate per mile was determined by summing the total number of main leaks (due to corrosion) repaired or eliminated each calendar year and then dividing this quantity by the sum of the miles of bare unprotected steel main plus coated unprotected steel main in the system at each calendar year end. The number of corrosion main leaks repaired or eliminated was obtained from the Company's Work Order Management System (WOMS) database. The regression line was added by selecting the "Add Trendline" feature within Microsoft Excel. The summary of statistical output for the regression analyses is attached.

(C) Pages 7 & 8 of Attachment AG-2-33 are graphs showing the number of cast iron bell joint leaks repaired or eliminated during each calendar year in Bay State's three operating areas collectively and the Brockton division operating area, individually. A bell joint leak is the name given to a leak that occurs at the bell and spigot connection of a cast iron gas main. The most common joint type is a "push-on" joint that is comprised of a plane pipe end or "spigot" end, which is inserted into an enlarged end or "bell" end. Individual segments of these mains average between 12 feet and 20 feet in length and are connected to one another by a bell and spigot joint. The annular space between the bell and spigot is filled with a jute packing to provide a fluid seal and finished with a lead or cement plug.

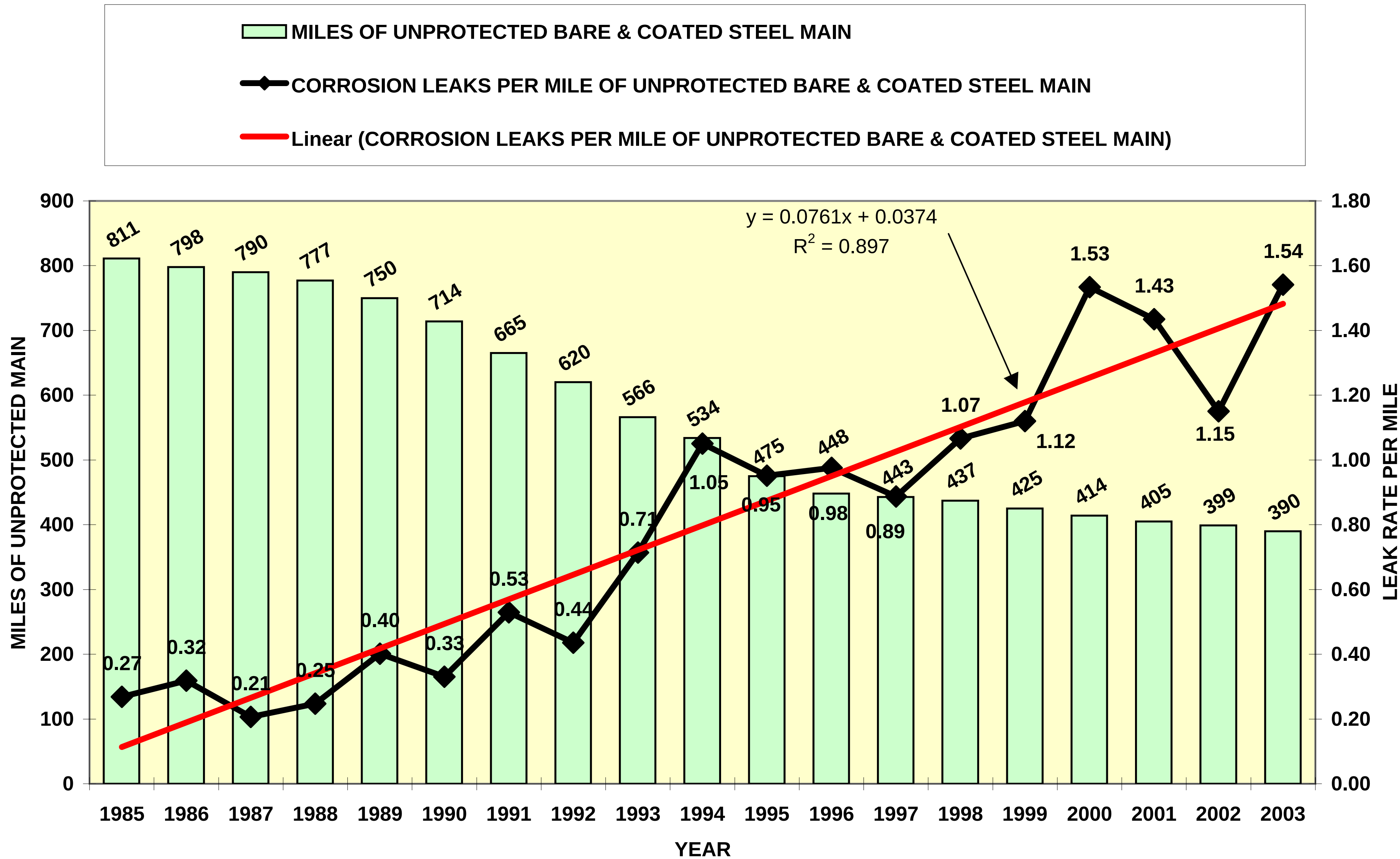
In the days of manufactured gas, the jute material was kept moist and compliant by the humidity and higher molecular weight hydrocarbons present in this gas, and as a result, the joints were usually leak free. However, for many years now, the natural gas flowing in these mains is characterized by its low humidity and high methane purity. This has resulted in the jute drying out and cracking, producing leaks. This condition is exacerbated by pipe movement primarily attributed to a combination of the depth of frost in any given year and the cyclic freezing and thawing of the ground around the cast iron pipe joint. Although the Company's WOMS tracks this cause of leak separately, the Company reports this type of leak as "Other" on RSPA Form F7100.1-1. This type of leak is dissimilar to corrosion. By DOT's own definition, "Corrosion" is the escape of gas resulting from a hole in the pipeline or component caused by galvanic, bacterial, chemical, stray current, or other corrosive action.

(D) Pages 9 & 10 of Attachment AG-2-33 are graphs showing the number of "Outside Force" leaks repaired or eliminated during each calendar year in Bay State's three operating areas collectively and the Brockton division operating area, individually. This cause of leak is usually attributed to gas leaks cased by earth movement such as washouts and landslides. Also included in this category is damage to gas facilities caused by lightning, ice, snow, etc., as well as damage done by operator's personnel or operator's contractor. This type of leak is also dissimilar to corrosion as defined in the paragraph above.

Revised Response:

The initial response required attachment of this Attachment DTE-18-23 Revised.

BAY STATE GAS - BROCKTON MA - MILES OF UNPROTECTED BARE & COATED STEEL MAIN AND CORROSION LEAK REPAIR RATE PER MILE



BROCKTON, MA DATA																			
YEAR	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
CORROSION LEAKS	218	254	163	192	301	236	352	270	404	561	452	437	393	466	476	635	581	459	601
MILES OF UNPROTECTED BARE STEEL PIPE	480	470	463	453	447	437	429	419	412	404	389	378	370	357	346	338	331	327	320
MILES OF UNPROTECTED COATED STEEL MAIN	331	328	327	324	303	277	236	201	154	130	86	70	73	80	79	76	74	72	70
MILES OF UNPROTECTED BARE & COATED STEEL MAIN	811	798	790	777	750	714	665	620	566	534	475	448	443	437	425	414	405	399	390
CORROSION LEAKS PER MILE OF UNPROTECTED BARE & COATED STEEL MAIN	0.27	0.32	0.21	0.25	0.40	0.33	0.53	0.44	0.71	1.05	0.95	0.98	0.89	1.07	1.12	1.53	1.43	1.15	1.54
YEAR														1998	1999	2000	2001	2002	2003
CORROSION LEAKS														317	249	235	217	150	247
NUMBER OF UNPROTECTED BARE STEEL SERVICES														21,677	21,103	20,566	20,212	19,564	19,099
CORROSION LEAKS PER 1000 UNPROTECTED BARE STEEL SERVICES														14.6	11.8	11.4	10.7	7.7	12.9
YEAR	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
LEAKS OUTSTANDING AT END OF YEAR	0	0	0	0	19	42	16	49	25	0	0	0	0	0	10	14	12	18	99

BROCKTON

Calendar Year	Data Year	Miles of Unprotected Steel Main	Corrosion Leaks Eliminated or Repaired	Corrosion Leaks Repaired per Miles of US Main	Calc for CLRE per Mile of US Main
1985	1	811	218	0.27	0.268803946
1986	2	798	254	0.32	0.318295739
1987	3	790	163	0.21	0.206329114
1988	4	777	192	0.25	0.247104247
1989	5	750	301	0.40	0.401333333
1990	6	714	236	0.33	0.330532213
1991	7	665	352	0.53	0.529323308
1992	8	620	270	0.44	0.435483871
1993	9	566	404	0.71	0.713780919
1994	10	534	561	1.05	1.050561798
1995	11	475	452	0.95	0.951578947
1996	12	448	437	0.98	0.975446429
1997	13	443	393	0.89	0.887133183
1998	14	437	466	1.07	1.066361556
1999	15	425	476	1.12	1.12
2000	16	414	635	1.53	1.533816425
2001	17	405	581	1.43	1.434567901
2002	18	399	459	1.15	1.15037594
2003	19	390	601	1.54	1.541025641

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9471209
R Square	0.897038
Adjusted R Square	0.8909814
Standard Error	0.1492053
Observations	19

ANOVA

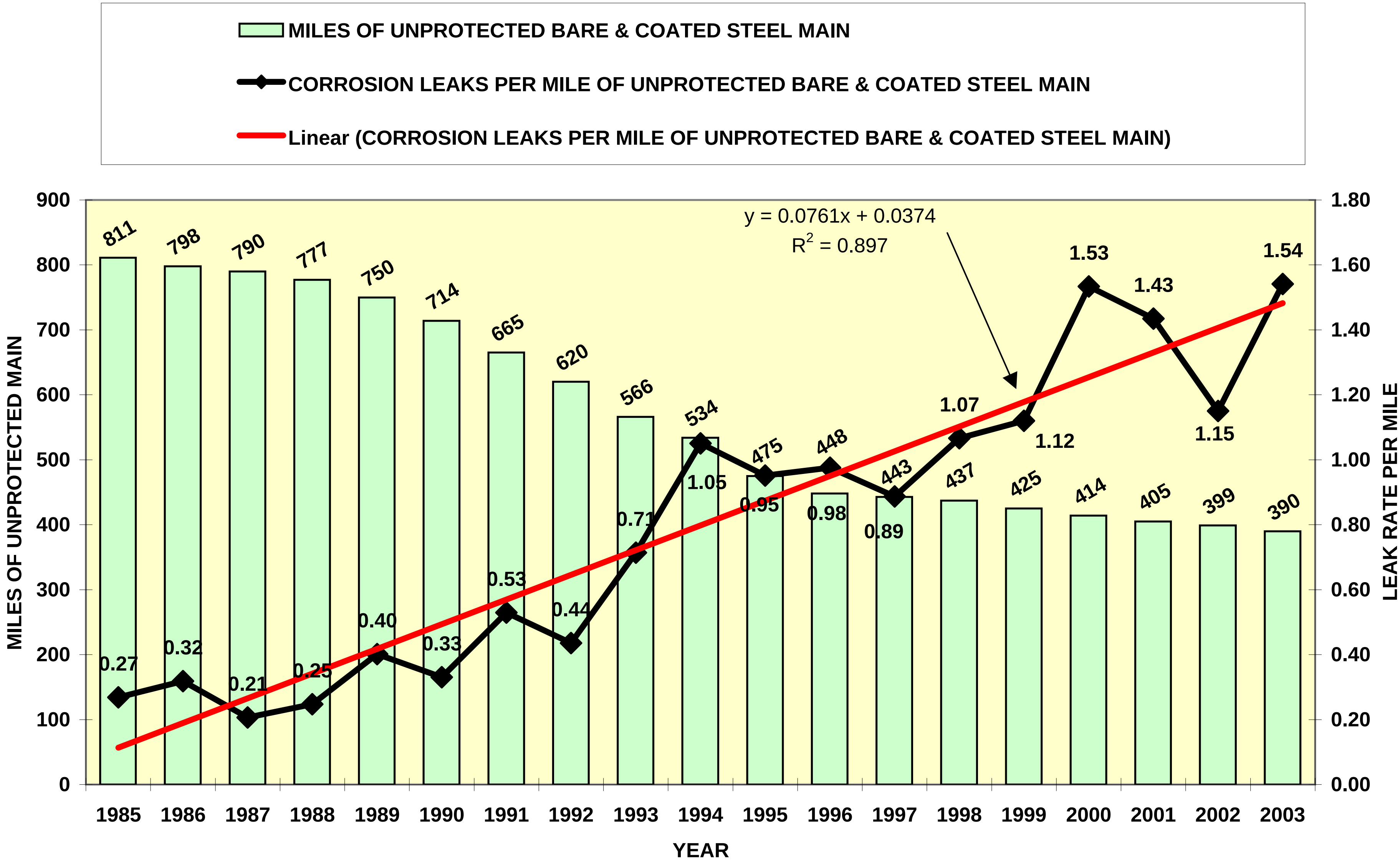
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.297244347	3.297244347	148.1094489	8.11133E-10
Residual	17	0.378457649	0.022262215		
Total	18	3.675701996			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.0374242	0.071255506	0.525211146	0.606219336	-0.112912001	0.18776037	-0.112912	0.187760374
Data Year	0.0760568	0.006249521	12.17002255	8.11133E-10	0.06287146	0.08924217	0.06287146	0.089242172

RESIDUAL OUTPUT

Observation	*Predicted Corrosion Leaks Repaired per Miles of US Main*	*Residuals*	*Standard Residuals*
1	0.113481	0.155322944	1.071181891
2	0.1895378	0.128757922	0.887976694
3	0.2655946	-0.059265519	-0.40872359
4	0.3416514	-0.094547202	-0.65204308
5	0.4177083	-0.016374931	-0.11292942
6	0.4937651	-0.163232867	-1.12573253
7	0.5698219	-0.040498587	-0.27929778
8	0.6458787	-0.21039484	-1.45098424
9	0.7219355	-0.008154608	-0.05623811
10	0.7979923	0.252569455	1.741840708
11	0.8740492	0.077529789	0.534682797
12	0.950106	0.025340455	0.17475999
13	1.0261628	-0.139029607	-0.95881518
14	1.1022196	-0.035858049	-0.24729439
15	1.1782764	-0.058276421	-0.40190229
16	1.2543332	0.279483189	1.927450787
17	1.3303901	0.104177849	0.718460664
18	1.4064469	-0.256070928	-1.76598855
19	1.4825037	0.058521958	0.403595629

BAY STATE GAS - BROCKTON MA - MILES OF UNPROTECTED BARE & COATED STEEL MAIN AND CORROSION LEAK REPAIR RATE PER MILE



BROCKTON, MA DATA																			
YEAR	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
CORROSION LEAKS	218	254	163	192	301	236	352	270	404	561	452	437	393	466	476	635	581	459	601
MILES OF UNPROTECTED BARE STEEL PIPE	480	470	463	453	447	437	429	419	412	404	389	378	370	357	346	338	331	327	320
MILES OF UNPROTECTED COATED STEEL MAIN	331	328	327	324	303	277	236	201	154	130	86	70	73	80	79	76	74	72	70
MILES OF UNPROTECTED BARE & COATED STEEL MAIN	811	798	790	777	750	714	665	620	566	534	475	448	443	437	425	414	405	399	390
CORROSION LEAKS PER MILE OF UNPROTECTED BARE & COATED STEEL MAIN	0.27	0.32	0.21	0.25	0.40	0.33	0.53	0.44	0.71	1.05	0.95	0.98	0.89	1.07	1.12	1.53	1.43	1.15	1.54
YEAR														1998	1999	2000	2001	2002	2003
CORROSION LEAKS														317	249	235	217	150	247
NUMBER OF UNPROTECTED BARE STEEL SERVICES														21,677	21,103	20,566	20,212	19,564	19,099
CORROSION LEAKS PER 1000 UNPROTECTED BARE STEEL SERVICES														14.6	11.8	11.4	10.7	7.7	12.9
YEAR	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
LEAKS OUTSTANDING AT END OF YEAR	0	0	0	0	19	42	16	49	25	0	0	0	0	0	10	14	12	18	99

Calendar Year	Data Year	CORROSION LEAKS PER MILE OF UNPROTECTED BARE & COATED STEEL MAIN
1985	1	0.27
1986	2	0.32
1987	3	0.21
1988	4	0.25
1989	5	0.40
1990	6	0.33
1991	7	0.53
1992	8	0.44
1993	9	0.71
1994	10	1.05
1995	11	0.95
1996	12	0.98
1997	13	0.89
1998	14	1.07
1999	15	1.12
2000	16	1.53
2001	17	1.43
2002	18	1.15
2003	19	1.54

	Data Year	*CORROSION LEAKS PER MILE OF UNPROTECTED BARE & COATED STEEL MAIN*
Data Year	1	
CORROSION LEAKS PER MILE OF UNPROTECTED BARE & COATED STEEL MAIN	0.947120897	1

slope	0.076056816
y-int	-150.859298

Filename:DTE 18-23 (ppt slide 1).xls
Worksheet:STAT SUM

corr, r	0.947120897
rsq	0.897037994

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.947120897
R Square	0.897037994
Adjusted R Square	0.890981406
Standard Error	0.149205277
Observations	19

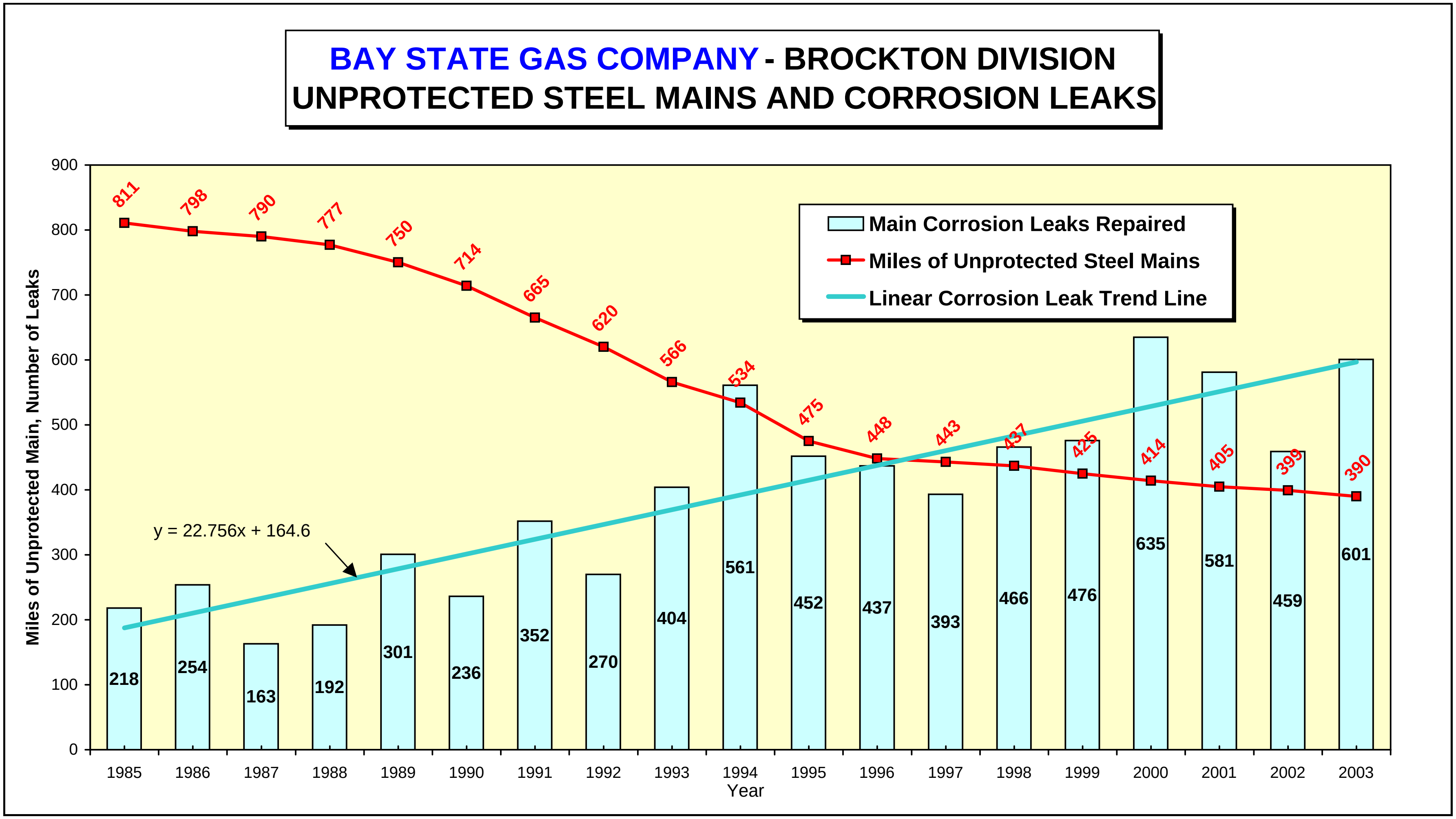
ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.297244347	3.297244	148.1094	8.11E-10
Residual	17	0.378457649	0.022262		
Total	18	3.675701996			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-150.859298	12.46159256	-12.10594	8.8E-10	-177.151	-124.5676	-177.151	-124.5676
Calendar Year	0.076056816	0.006249521	12.17002	8.11E-10	0.062871	0.089242	0.062871	0.089242

RESIDUAL OUTPUT

Observation	*Predicted CORROSION LEAKS PER MILE OF UNPROTECTED BARE & COATED STEEL MAIN*	*Residuals*	*Standard Residuals*
1	0.113481002	0.155322944	1.071182
2	0.189537818	0.128757922	0.887977
3	0.265594633	-0.059265519	-0.408724
4	0.341651449	-0.094547202	-0.652043
5	0.417708264	-0.016374931	-0.112929
6	0.49376508	-0.163232867	-1.125733
7	0.569821896	-0.040498587	-0.279298
8	0.645878711	-0.21039484	-1.450984
9	0.721935527	-0.008154608	-0.056238
10	0.797992343	0.252569455	1.741841
11	0.874049158	0.077529789	0.534683
12	0.950105974	0.025340455	0.17476
13	1.02616279	-0.139029607	-0.958815
14	1.102219605	-0.035858049	-0.247294
15	1.178276421	-0.058276421	-0.401902
16	1.254333236	0.279483189	1.927451
17	1.330390052	0.104177849	0.718461
18	1.406446868	-0.256070928	-1.765989
19	1.482503683	0.058521958	0.403596


BAY STATE GAS COMPANY - BROCKTON DIVISION
UNPROTECTED STEEL MAINS AND CORROSION LEAKS
Main Corrosion Leaks Repaired
Miles of Unprotected Steel Mains
Linear Corrosion Leak Trend Line
y = 22.756x + 164.6
Miles of Unprotected Main, Number of Leaks
Year
0
100
200
300
400
500
600
700
800
900
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
811
798
790
777
750
714
665
620
566
534
475
448
443
437
425
414
405
399
390
218
254
163
192
301
236
352
270
404
561
452
437
393
466
476
635
581
459
601

Brockton Data **Mains**

Year	Unprotected Bare Steel	Unprotected Coated Steel	Cathodically Protected Bare Steel	Cathodically Protected Coated Steel
1985	480	331	0	980
1986	470	328	0	990
1987	463	327	0	995
1988	453	324	0	1008
1989	447	303	0	1038
1990	437	277	0	1066
1991	429	236	0	1107
1992	419	201	0	1145
1993	412	154	0	1193
1994	404	130	0	1220
1995	389	86	0	1267
1996	378	70	0	1287
1997	370	73	0	1288
1998	357	80	0	1285
1999	346	79	0	1290
2000	338	76	0	1293
2001	331	74	0	1294
2002	327	72	0	1294
2003	320	70	0	1296

Calendar Year	Data Year	Corrosion Leaks Repaired or Eliminated	Unprotected Steel Mains
1985	1	218	811
1986	2	254	798
1987	3	163	790
1988	4	192	777
1989	5	301	750
1990	6	236	714
1991	7	352	665
1992	8	270	620
1993	9	404	566
1994	10	561	534
1995	11	452	475
1996	12	437	448
1997	13	393	443
1998	14	466	437
1999	15	476	425
2000	16	635	414
2001	17	581	405
2002	18	459	399
2003	19	601	390

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.8805719
R Square	0.7754069
Adjusted R Squ	0.7621955
Standard Error	70.916119
Observations	19

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	295169.8965	295169.8965	58.69243777	6.547E-07
Residual	17	85494.62982	5029.095872		
Total	18	380664.5263			

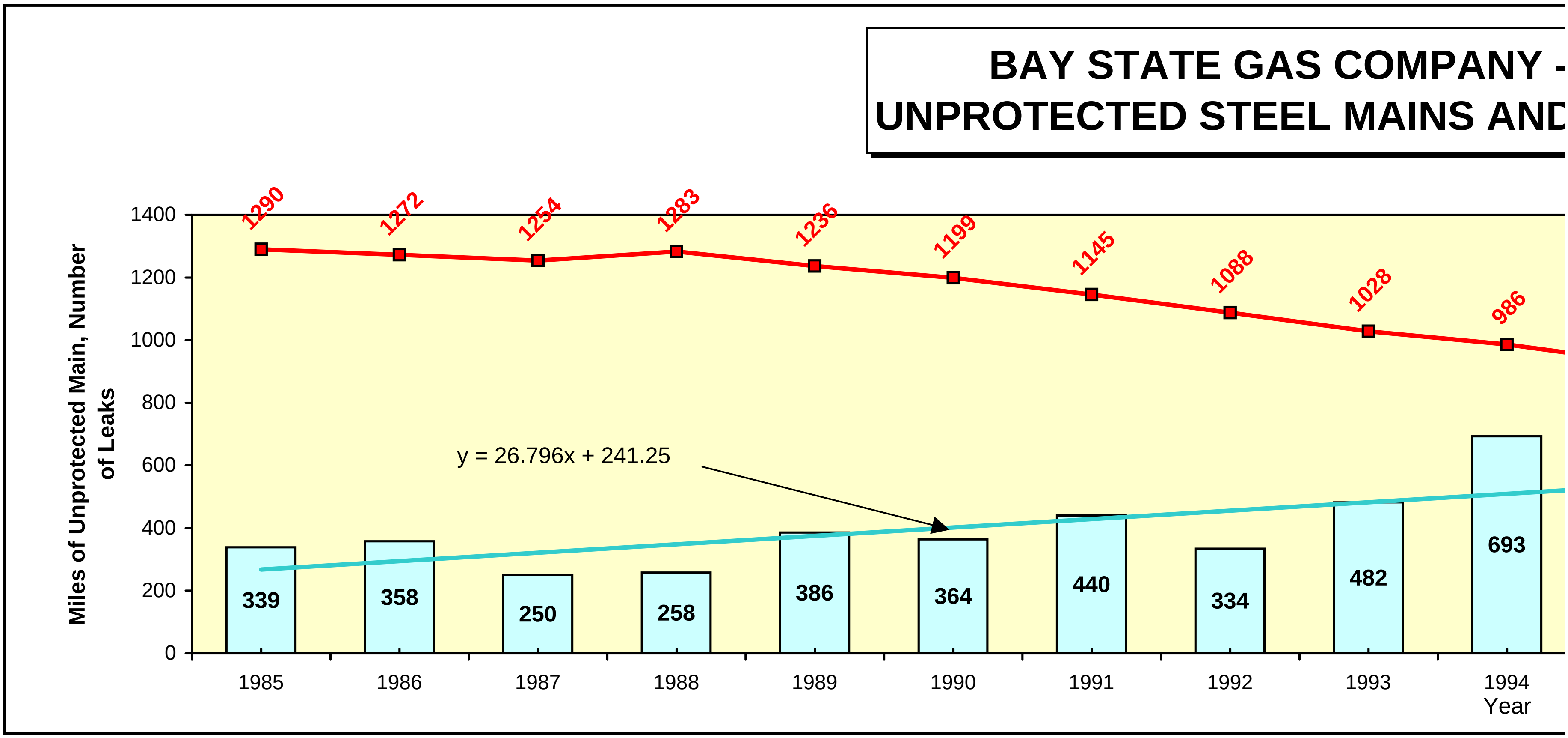
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	164.59649	33.86719324	4.860057049	0.000147004	93.14286	236.05012	93.14286	236.0501
Data Year	22.75614	2.970349342	7.661098992	6.54678E-07	16.489242	29.023038	16.48924	29.02304

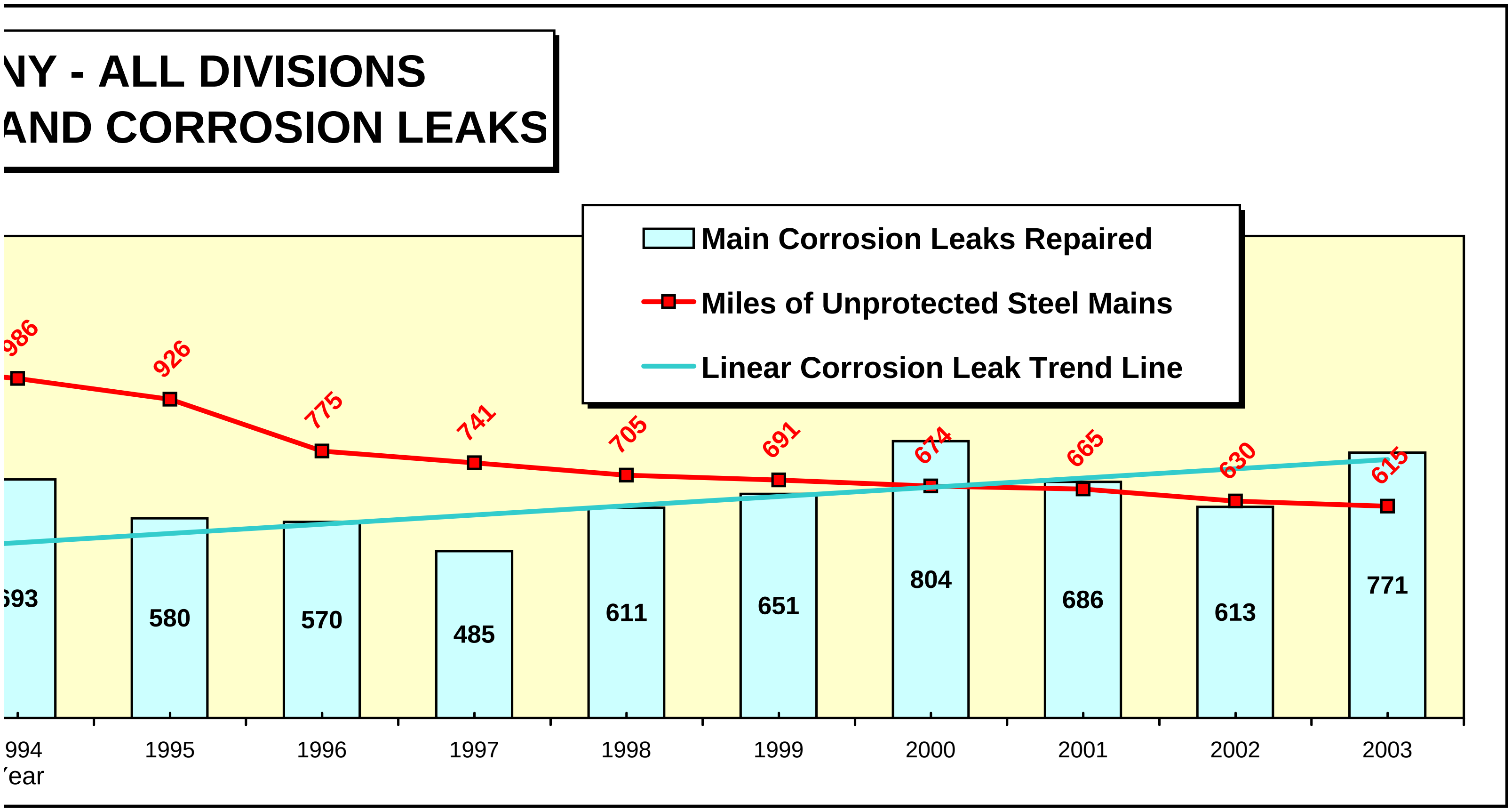
RESIDUAL OUTPUT

Observation	*Predicted Corrosion Leaks Repaired of Eliminated*	*Residuals*	*Standard Residuals*
1	187.35263	30.64736842	0.444692724
2	210.10877	43.89122807	0.636860872
3	232.86491	-69.86491228	-1.013738528
4	255.62105	-63.62105263	-0.923140245
5	278.37719	22.62280702	0.328256493
6	301.13333	-65.13333333	-0.945083409
7	323.88947	28.11052632	0.407883194
8	346.64561	-76.64561404	-1.11212638
9	369.40175	34.59824561	0.502019876
10	392.15789	168.8421053	2.449895687
11	414.91404	37.08596491	0.538116635
12	437.67018	-0.670175439	-0.009724233
13	460.42632	-67.42631579	-0.97835454
14	483.18246	-17.18245614	-0.249317107
15	505.9386	-29.93859649	-0.434408457
16	528.69474	106.3052632	1.542487316
17	551.45088	29.54912281	0.428757201
18	574.20702	-115.2070175	-1.6716516
19	596.96316	4.036842105	0.058574501

PROBABILITY OUTPUT

Percentile	*Corrosion Leaks Repaired or Eliminated*
2.6315789	163
7.8947368	192
13.157895	218
18.421053	236
23.684211	254
28.947368	270
34.210526	301
39.473684	352
44.736842	393
50	404
55.263158	437
60.526316	452
65.789474	459
71.052632	466
76.315789	476
81.578947	561
86.842105	581
92.105263	601
97.368421	635


BAY STATE GAS COMPANY -
UNPROTECTED STEEL MAINS AND
Miles of Unprotected Main, Number of Leaks
1400
1200
1000
800
600
400
200
0
1290
1272
1254
1283
1236
1199
1145
1088
1028
986
y = 26.796x + 241.25
339
358
250
258
386
364
440
334
482
693
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
Year


NY - ALL DIVISIONS
AND CORROSION LEAKS
Main Corrosion Leaks Repaired
Miles of Unprotected Steel Mains
Linear Corrosion Leak Trend Line
986
926
775
741
705
691
674
665
630
615
593
580
570
485
611
651
804
686
613
771
994
1995
1996
1997
1998
1999
2000
2001
2002
2003
'ear

ALL BSG MAINS

Calendar Year	Unprotected Bare Steel	Unprotected Coated Steel	Cathodically Protected Bare Steel	Cathodically Protected Coated Steel	Unprotected Steel Mains	Corrosion Leaks Repaired or Eliminated
1985	636	654	0	1480	1290	339
1986	623	649	0	1500	1272	358
1987	615	639	0	1509	1254	250
1988	721	562	0	1477	1283	258
1989	700	536	0	1524	1236	386
1990	688	511	0	1558	1199	364
1991	677	468	0	1600	1145	440
1992	648	440	0	1650	1088	334
1993	638	390	0	1722	1028	482
1994	624	362	0	1738	986	693
1995	607	319	0	1781	926	580
1996	593	182	0	1925	775	570
1997	580	161	0	1950	741	485
1998	562	143	0	1976	705	611
1999	552	139	0	1985	691	651
2000	542	132	0	1993	674	804
2001	534	131	0	1995	665	686
2002	518	112	0	2011	630	613
2003	506	109	0	2024	615	771

ALL BSG			
Calendar Year	Data Year	Corrosion Leaks Repaired or Eliminated	Unprotected Steel Mains
1985	1	339	1290
1986	2	358	1272
1987	3	250	1254
1988	4	258	1283
1989	5	386	1236
1990	6	364	1199
1991	7	440	1145
1992	8	334	1088
1993	9	482	1028
1994	10	693	986
1995	11	580	926
1996	12	570	775
1997	13	485	741
1998	14	611	705
1999	15	651	691
2000	16	804	674
2001	17	686	665
2002	18	613	630
2003	19	771	615

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.882422271
R Square	0.778669064
Adjusted R So	0.765649597
Standard Errc	82.72475655
Observations	19

ANOVA

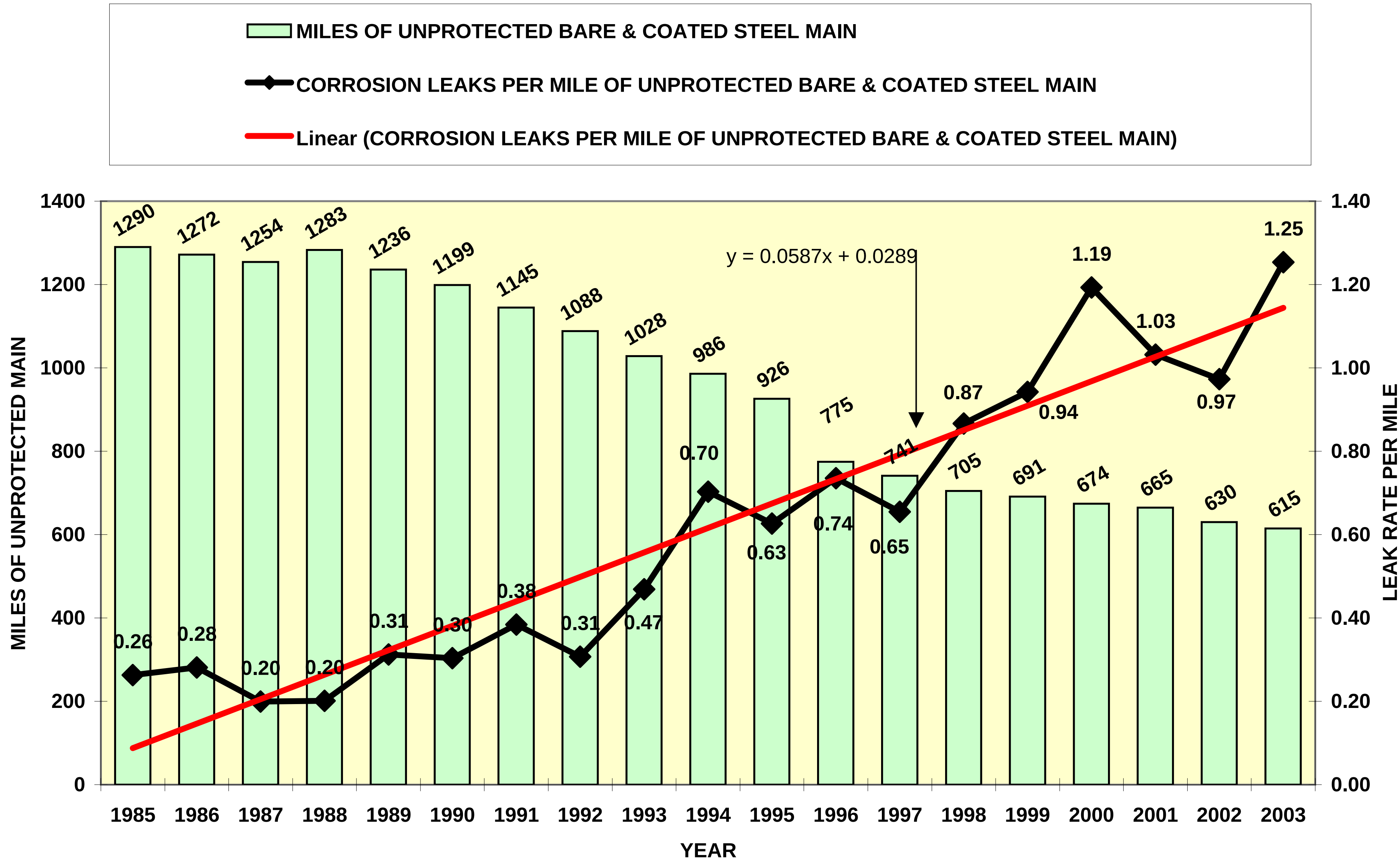
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	409289.61	409289.607	59.8081	5.7706E-07
Residual	17	116337.55	6843.385346		
Total	18	525627.16			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	241.245614	39.506608	6.106462302	1.2E-05	157.89384	324.597388	157.8938401	324.597388
Data Year	26.79649123	3.4649588	7.733567148	5.8E-07	19.4860571	34.1069254	19.48605705	34.1069254

RESIDUAL OUTPUT

Observation	*Predicted Corrosion Leaks Repaired or Eliminated*	*Residuals*	*Standard Residuals*
1	268.0421053	70.957895	0.882626609
2	294.8385965	63.161404	0.785648103
3	321.6350877	-71.63509	-0.891050034
4	348.4315789	-90.43158	-1.12485465
5	375.2280702	10.77193	0.133989205
6	402.0245614	-38.02456	-0.472977528
7	428.8210526	11.178947	0.139051989
8	455.6175439	-121.6175	-1.512768673
9	482.4140351	-0.414035	-0.005150074
10	509.2105263	183.78947	2.286108973
11	536.0070175	43.992982	0.54721715
12	562.8035088	7.1964912	0.089515264
13	589.6	-104.6	-1.301091916
14	616.3964912	-5.396491	-0.067125536
15	643.1929825	7.8070175	0.09710944
16	669.9894737	134.01053	1.666921726
17	696.7859649	-10.78596	-0.134163784
18	723.5824561	-110.5825	-1.375506117
19	750.3789474	20.621053	0.256499856

BAY STATE GAS - ALL DIVISIONS
MILES OF UNPROTECTED BARE & COATED STEEL MAIN AND CORROSION LEAK REPAIR RATE PER MILE



ALL BAY STATE DIVISIONS,																			
YEAR	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
CORROSION LEAKS	339	358	250	258	386	364	440	334	482	693	580	570	485	611	651	804	686	613	771
MILES OF UNPROTECTED BARE STEEL PIPE	636	623	615	721	700	688	677	648	638	624	607	593	580	562	552	542	534	518	506
MILES OF UNPROTECTED COATED STEEL MAIN	654	649	639	562	536	511	468	440	390	362	319	182	161	143	139	132	131	112	109
MILES OF UNPROTECTED BARE & COATED STEEL MAIN	1290	1272	1254	1283	1236	1199	1145	1088	1028	986	926	775	741	705	691	674	665	630	615
CORROSION LEAKS PER MILE OF UNPROTECTED BARE & COATED STEEL MAIN	0.26	0.28	0.20	0.20	0.31	0.30	0.38	0.31	0.47	0.70	0.63	0.74	0.65	0.87	0.94	1.19	1.03	0.97	1.25

Calendar Year	Data Year	CORROSION LEAKS PER MILE OF UNPROTECTED BARE & COATED STEEL MAIN
1985	1	0.262790698
1986	2	0.281446541
1987	3	0.199362041
1988	4	0.201091193
1989	5	0.312297735
1990	6	0.303586322
1991	7	0.384279476
1992	8	0.306985294
1993	9	0.468871595
1994	10	0.702839757
1995	11	0.626349892
1996	12	0.735483871
1997	13	0.654520918
1998	14	0.866666667
1999	15	0.94211288
2000	16	1.192878338
2001	17	1.031578947
2002	18	0.973015873
2003	19	1.253658537

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.950050027
R Square	0.902595054
Adjusted R Square	0.896865351
Standard Error	0.111640006
Observations	19

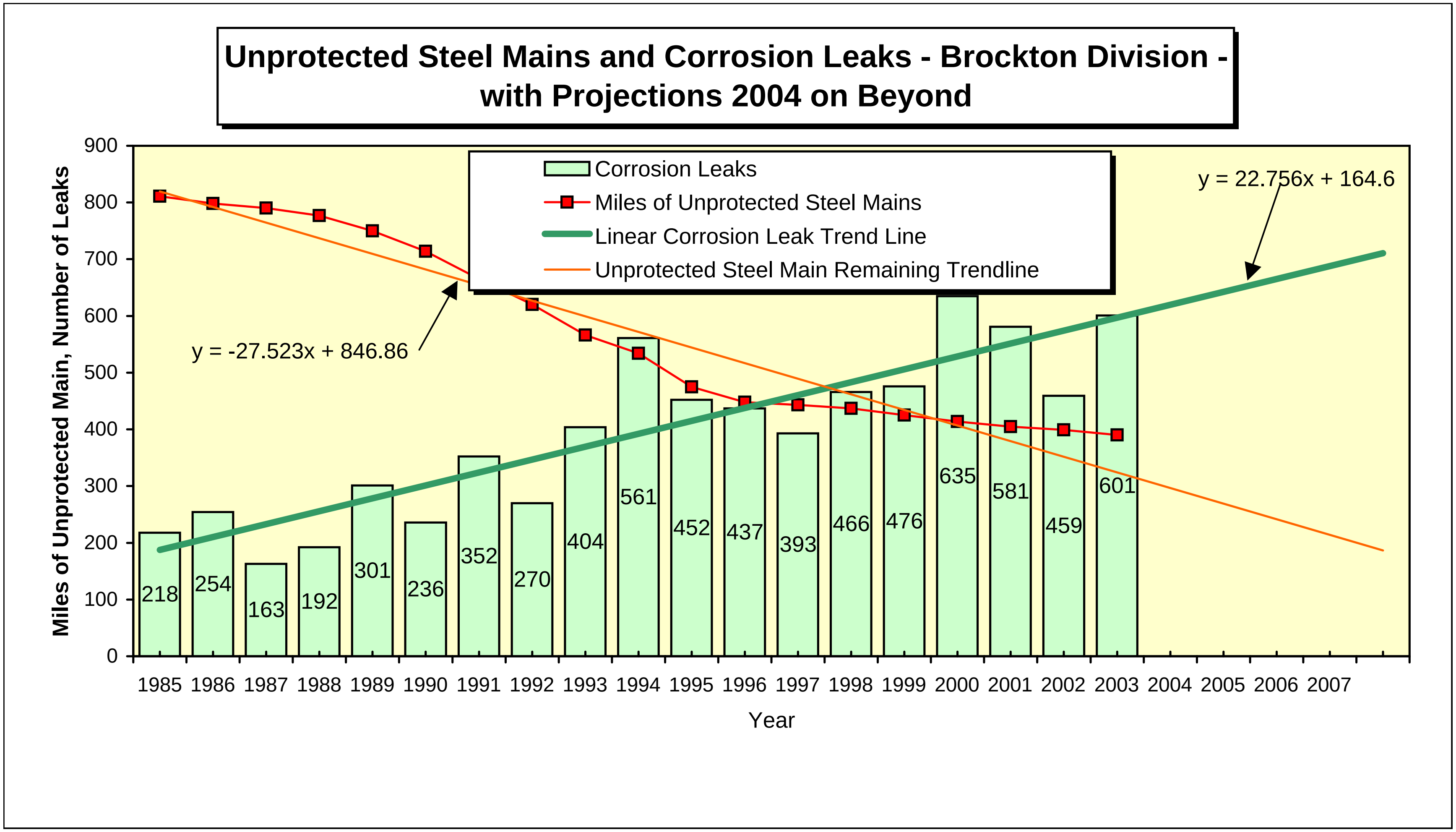
ANOVA

	df	SS	MS	F	Significance F
Regression	1	1.963362827	1.9633628	157.52912	5.04764E-10
Residual	17	0.211879347	0.0124635		
Total	18	2.175242173			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.028881516	0.053315575	0.5417088	0.5950485	-0.08360467	0.1413677	-0.0836047	0.1413677
Data Year	0.05868983	0.004676085	12.551061	5.048E-10	0.048824139	0.06855552	0.04882414	0.06855552

RESIDUAL OUTPUT

Observation	*Predicted CORROSION LEAKS PER MILE OF UNPROTECTED BARE & COATED STEEL MAIN*	*Residuals*	*Standard Residuals*
1	0.087571346	0.175219351	1.6150055
2	0.146261177	0.135185364	1.2460103
3	0.204951007	-0.005588966	-0.0515138
4	0.263640838	-0.062549645	-0.5765232
5	0.322330668	-0.010032933	-0.092474
6	0.381020498	-0.077434176	-0.7137147
7	0.439710329	-0.055430853	-0.5109089
8	0.498400159	-0.191414865	-1.7642804
9	0.557089989	-0.088218394	-0.8131133
10	0.61577982	0.087059937	0.8024358
11	0.67446965	-0.048119758	-0.4435222
12	0.73315948	0.002324391	0.021424
13	0.791849311	-0.137328393	-1.2657627
14	0.850539141	0.016127526	0.1486482
15	0.909228971	0.032883908	0.3030926
16	0.967918802	0.224959536	2.0734633
17	1.026608632	0.004970315	0.0458116
18	1.085298463	-0.11228259	-1.0349142
19	1.143988293	0.109670244	1.0108361


Unprotected Steel Mains and Corrosion Leaks - Brockton Division - with Projections 2004 on Beyond
Corrosion Leaks
Miles of Unprotected Steel Mains
Linear Corrosion Leak Trend Line
Unprotected Steel Main Remaining Trendline
y = 22.756x + 164.6
y = -27.523x + 846.86
Miles of Unprotected Main, Number of Leaks
900
800
700
600
500
400
300
200
100
0
218
254
163
192
301
236
352
270
404
561
452
437
393
466
476
635
581
459
601
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007
Year

BR mains

Year	Unprotected Bare Steel	Unprotected Coated Steel	Cathodically Protected Bare Steel	Cathodically Protected Coated Steel	Cor	Unprotected Steel Mains	Cor Leaks
1985	480	331	0	980	218	811	218
1986	470	328	0	990	254	798	254
1987	463	327	0	995	163	790	163
1988	453	324	0	1008	192	777	192
1989	447	303	0	1038	301	750	301
1990	437	277	0	1066	236	714	236
1991	429	236	0	1107	352	665	352
1992	419	201	0	1145	270	620	270
1993	412	154	0	1193	404	566	404
1994	404	130	0	1220	561	534	561
1995	389	86	0	1267	452	475	452
1996	378	70	0	1287	437	448	437
1997	370	73	0	1288	393	443	393
1998	357	80	0	1285	466	437	466
1999	346	79	0	1290	476	425	476
2000	338	76	0	1293	635	414	635
2001	331	74	0	1294	581	405	581
2002	327	72	0	1294	459	399	459
2003	320	70	0	1296	601	390	601

BR

Calendar Year	Data Year	Unprotected Steel Mains	Corrosion Leaks Repaired or Eliminated
1985	1	811	218
1986	2	798	254
1987	3	790	163
1988	4	777	192
1989	5	750	301
1990	6	714	236
1991	7	665	352
1992	8	620	270
1993	9	566	404
1994	10	534	561
1995	11	475	452
1996	12	448	437
1997	13	443	393
1998	14	437	466
1999	15	425	476
2000	16	414	635
2001	17	405	581
2002	18	399	459
2003	19	390	601

LEAK TREND
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.88057191
R Square	0.77540689
Adjusted R Square	0.76219553
Standard Error	70.9161186
Observations	19

ANOVA

	df	SS	MS	F	Significance F
Regression	1	295169.8965	295169.8965	58.692	6.55E-07
Residual	17	85494.62982	5029.095872		
Total	18	380664.5263			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	164.5964912	33.86719324	4.860057049	0.000147	93.14285957	236.050123	93.1428596	236.0501229
Data Year	22.75614035	2.970349342	7.661098992	6.55E-07	16.48924229	29.0230384	16.4892423	29.02303842

RESIDUAL OUTPUT

Observation	Predicted Corrosion Leaks Repaired or Eliminated	Residuals	Standard Residuals
1	187.352632	30.64736842	0.444692724
2	210.108772	43.89122807	0.636860872
3	232.864912	-69.8649123	-1.013738528
4	255.621053	-63.6210526	-0.923140245
5	278.377193	22.62280702	0.328256493
6	301.133333	-65.1333333	-0.945083409
7	323.889474	28.11052632	0.407883194
8	346.645614	-76.645614	-1.11212638
9	369.401754	34.59824561	0.502019876
10	392.157895	168.8421053	2.449895687
11	414.914035	37.08596491	0.538116635
12	437.670175	-0.67017544	-0.009724233
13	460.426316	-67.4263158	-0.97835454
14	483.182456	-17.1824561	-0.249317107
15	505.938597	-29.9385965	-0.434408457
16	528.694737	106.3052632	1.542487316
17	551.450877	29.54912281	0.428757201
18	574.207018	-115.207018	-1.6716516
19	596.963158	4.036842105	0.058574501

MAIN TREND
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.96969184
R Square	0.94030227
Adjusted R Square	0.93679064
Standard Error	40.1560372
Observations	19

ANOVA

	df	SS	MS	F	Significance F
Regression	1	431777.7965	431777.7965	267.77	7.73E-12
Residual	17	27412.62456	1612.507327		
Total	18	459190.4211			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	846.8596491	19.17719555	44.15972331	5.54E-19	806.3992467	887.320052	806.399247	887.3200515
Data Year	-27.52280702	1.681951314	-16.36361694	7.73E-12	-31.07141906	-23.974195	-31.071419	-23.97419498

RESIDUAL OUTPUT

Observation	Predicted Unprotected Steel Mains	Residuals	Standard Residuals
1	819.336842	-8.33684211	-0.213630137
2	791.814035	6.185964912	0.158514281
3	764.291228	25.70877193	0.658782835
4	736.768421	40.23157895	1.030927254
5	709.245614	40.75438596	1.044324093
6	681.722807	32.27719298	0.827097489
7	654.2	10.8	0.276748133
8	626.677193	-6.67719298	-0.171101916
9	599.154386	-33.154386	-0.849575408
10	571.631579	-37.631579	-0.964302704
11	544.108772	-69.1087719	-1.770900331
12	516.585965	-68.5859649	-1.757503491
13	489.063158	-46.0631579	-1.180360456
14	461.540351	-24.5403509	-0.628842248
15	434.017544	-9.01754386	-0.231073002
16	406.494737	7.505263158	0.192321071
17	378.97193	26.02807018	0.666964798
18	351.449123	47.55087719	1.218483006
19	323.926316	66.07368421	1.693126733